

**ECONOMICS
HIGHER LEVEL
PAPER 3**

SPECIMEN PAPER

1 hour

Candidate session number

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INSTRUCTIONS TO CANDIDATES

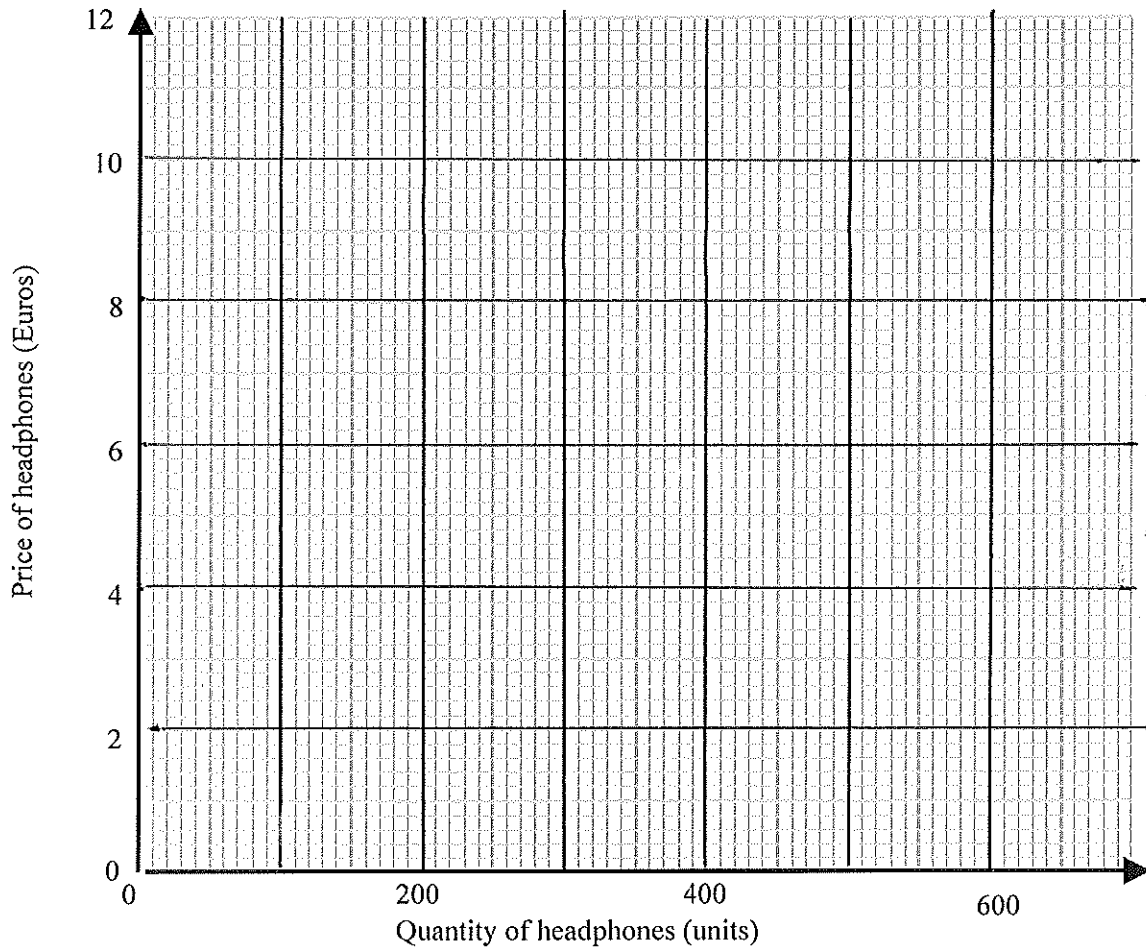
- Write your session number in the boxes above.
- You are permitted access to a calculator for this paper.
- Do not open this examination paper until instructed to do so.
- Answer two questions in the spaces provided.
- Unless otherwise stated in the question, all numerical answers must be given exactly or correct to two decimal places.
- You must show all your working.

1. The daily supply and demand curves for headphones in a city are given by

$$Q_S = -100 + 60P \quad Q_D = 500 - 20P$$

Where Q_S and Q_D are the quantities in units and P is the price in Euros

- (a) Construct the supply and demand curves on the graph below and identify the Q intercept for the demand curve and the P intercept for the supply curve. **[4 marks]**



- (b) Calculate the equilibrium price and quantity and identify both of these on the graph. **[4 marks]**

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(This question continues on the following page)

The government decides to impose a specific tax of €2.00 per headphone.

- (c) Distinguish between a specific (flat rate) tax and ad-valorem tax [2 marks]

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- (d) State the equation for the new supply function after the imposition of the specific tax. [1 mark]

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- (e) Draw a new curve on the graph to reflect the imposition of this tax and identify the new P intercept of this curve. [2 marks]

- (f) Explain, with reference to the figures, why the new equilibrium price is not €2.00 higher than the original equilibrium price. [4 marks]

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- (g) Calculate the incidence of tax on consumers and the incidence of tax on producers (i.e. what proportion of the tax is paid by producers and consumers) [2 marks]

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- (h) Calculate the change in consumer surplus as a result of the imposition of this tax.

[2 marks]

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- (i) Calculate the change in producer surplus as a result of the imposition of this tax.

[2 marks]

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- (j) Calculate the deadweight loss to society as a result of the imposition of this tax.

[2 marks]

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Total marks for Question 1: 25 marks

2. The table below shows the income tax rates that apply to different ranges of earnings for workers in Hong Kong.

Income (HK\$)	Income tax rate (%)
0 - 40,000	2%
40,001 – 80,000	7%
80,001- 120,000	12%
120,001+	17%

- 1) Raymond (low income) earns HK\$ 65,000 per year and spends HK\$ 5,000 on cigarettes, of which 50% is tobacco duty.
- 2) Alison (middle income) earns HK\$ 100,000 per year and spends HK\$ 7,500 on cigarettes, of which 50% is tobacco duty.
- 3) Hursh (high income) earns HK\$ 260,000 per year and spends HK\$ 14,500 on cigarettes, of which 50% is tobacco duty.

(a) Distinguish between income tax and tobacco (excise) duties.

[2 marks]

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(b) Calculate the Income Tax payable by individuals above as a percentage of their income:

[6 marks]

Raymond.....

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Alison.....

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Hursh.....

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(c) Calculate the amount of **tobacco duty** paid by Raymond, Alison and Hursh as a percentage of their income. *[3 marks]*

Raymond:.....

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Alison:.....

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Hursh:

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(d) With reference to the concepts of average rates of tax, use the data from the table and your answers to (b) and (c) to explain whether income tax is progressive or regressive **and** whether tobacco duty is progressive or regressive. *[4 marks]*

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(e) Give one reason why governments impose taxes on tobacco products *[2 marks]*

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(f) Calculate the average rate of total tax (income + tobacco duty) paid by Raymond, Alison and Hursh as a percentage of their individual incomes. *[3 marks]*

Raymond:.....

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Alison:.....

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Hursh:

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f) Explain, with the use of examples, how income tax can be used as both a tool of demand side management and a supply side policy. *[5 marks]*

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Total marks for Question 2: 25 marks

3. The following equations describe the daily demand for and supply of Euros (€) in December 2010, where e is the price of the Euro expressed in US\$, Q_d is the quantity of Euros demanded per day and Q_s is the quantity of Euros supplied per day (in billions).

$$Q_d = 352.92 - 6e$$

$$Q_s = 338.4 + 5e$$

- [a] Determine the exchange rate of the Euro in US\$ and the volume of Euros traded per day.

[3 marks]

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- [b] Using the exchange rate determined above, calculate the how much it would cost in Euro's for a German to buy an imported kayak from the US, priced at \$250 and how much it would cost an American to buy a bottle of imported French wine, priced at € 7.50.

[2 marks]

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- [c] Using the original exchange rate calculated above, explain what should happen to the price of American kayaks in Germany and French wine in the US if the Euro appreciated against the US\$.

[4 marks]

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[d] State two factors that may have caused the Euro to appreciate against the US\$. **[2 marks]**

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[e] Given the data below for France's 2008-09 Balance of Payments (extract), calculate the values for X1, X2, X3 & X4. **[4 marks]**

Balance of Payments item	Euros (millions)
<i>Receipts/Credits</i>	
Goods	231,564
Services	X1
Income	42,824
Current transfers	6,657
<i>Payments/Debits</i>	
Goods	220,649
Services	56,170
Income	88,231
Current transfers	X2
Trade balance of goods & services	7,622
Net income flows	X3
Net current transfers	-995
Current account Balance	X4

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[f] Explain one possible reason for the value of France's Net Income Flow calculated above.

[2 marks]

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Nigeria is a net exporter of oil and is dependent on it as a major source of export revenue. The table below sets out the average price of oil between 2003 and 2008 and the oil export revenue earned by Nigeria.

Year	Average price of oil (US\$ per barrel)	Index of oil prices	Oil export revenue (US\$ billions)
2003	37		20.2
2004	42		22.8
2005	46		34.1
2006	55		38.9
2007	59		42.4
2008	95		54.6

Using the data in the table answer the following questions.

[g] Calculate the number of barrels of oil sold in 2008.

[1 mark]

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[h] Using 2004 as a base year, convert the average price of oil into index numbers and complete the table (use whole numbers for the index numbers)

[3 marks]

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[i] Explain the impact that the rising oil price might have had on Nigeria's terms of trade.

[4 marks]

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Total marks for question 3: 25 marks